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Subject: Revised RI Mobilization approach
Date: Friday, June 3, 2016 3:40:00 PM

Team, based on our conversation this morning please find listed below the revised RI Mobilization approach. Please send any clarification or correction.

Revised mobilization strategy for the RI investigation:

## Mobilization 1:

- Site Reconnaissance. Clear and grubbing, Asbestos Survey, NORM survey (specific to coal tar coated piping, sludge ponds, separation ponds), wetlands survey, survey for location of seeps with IR camera, reconnaissance of potential tanks on east side (Tanks 1 and 4), waste delineation using GPS
- Lorraine Well: Develop parsonage well; survey it: camera, temp probe and field conductivity; manage (IDW); measure LNAPL thickness; collect LNAPL and water sample (I will check with USGS for possible assistance with borehole geophysics)
- GW residential wells: sample wells (10 + 2 additional wells that may be accessible in the tank farm) Full suite: VOCs, SVOCs, metals, hex chromium, ph, turbidity, conductivity, and temperature.
- Migration to Sand Creek: Based on borings and the identification of shallow water, install piezometers where water may be seeping to Sand Creek (Wilcox and Lorraine) and the East Tributary (Tank 3). These will be prepacked, 2-in diameter; gauge the depth to water at installation and once more toward the end of the mobilization and collect a sample, if water is accumulated. Estimated number is 10. Full suite: VOCs, SVOCs, metals, hex chromium, ph, turbidity, conductivity, and temperature.
- Wilcox and Lorraine Process Areas delineate the ROST with soil borings with sampling above, below, and around the "green area" (soil nature and extent delineation); focus sampling in the areas of non-contamination that represent all risk horizons from 0 to 10 ft below ground surface. Full suite: VOCs, SVOCs, metals.
- East Tank Farm (ETF) delineate the ROST with soil borings around former Tanks 3 and 5 as done on Lorraine/Wilcox and delineate around Tanks 1 and 4 (maybe coming from the east side; based on reconnaissance information) Full suite: VOCs, SVOCs, metals.
- PSG sampling for VOCs in the ROST areas: Wilcox, Lorraine, ETF (Tank 5), Tanks 11 and 12; BTEX and check on naphthalene
- Soil background (to make decisions on COPCs retained moving forward): incremental (Full suite: metals, PAHs)
- Surface water/sediment in creeks, tributaries, and ponds (refined from current designed and reconnaissance of seeps/thermal information), depending on funding and schedule Work by HQ
  - Lead area delineation with protocols and QA/QC procedures established for XRF (to be done by Deana); the FSP will referenced as an appendix. Delineation criteria is 200 mg/kg.

## Work by ODEQ

• Thermal camera investigation of Sand Creek and the East Tributary

## Mobilization 2:

• Soil Sampling: decision units defined by mob 1 soil boring data; Wilcox/Lorraine and ETF decision units sampling—ICS proposed for upper 2 feet. Reduced COPC list

based on soil boring data from Mob 1, plus PCB and Dioxin/furan in select units based on historical use

- Vapor intrusion: refine based on PSG results
- Ground water characterization consisting of monitoring well installation; abandonment of the parsonage well
- NTF and Loading Dock: decision units defined based on reconnaissance; waste characterization and soil sampling
- Surface water/sediment in creeks, tributaries, and ponds; if not done in Mobilization 1
- Drainage ditches by ICS
- Waste sampling and characterization: based on reconnaissance defined areas and waste types

## Mobilization 3:

214-665-8143

• Biota (if necessary)

Tom, let's talk about what portions might be done by ERT either under mob 1 or mob 2. Katrina Higgins-Coltrain
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